8.2.4 Discussion

The goal of these projections was to explore four rebuilding strategies that may bring southern flounder to the SSB target within 10 years, including an increase in size limit above the 50% maturity level for female southern flounder (13.6 in). The accuracy of any projection relies on the validity of the model assumptions and the key signals in the assessment data. Projections assume that the estimated stock-recruit relationship applies into the future and that past residuals represent future uncertainty in recruitment. The lack of historical data to better depict the response of age-0 recruitment to an increase in spawning stock biomass emphasizes that the projections presented here are conservative. The 30% reduction scenario will achieve the threshold SSB within five years, however the 20% scenario mean is projected to peak before reaching the threshold. A re-assessment of our progress can be made after three years of a new management scenario to ground-truth projection results.

8.3 Determination of Sustainable Harvest

The FRA requires that each FMP include "conservation and management measures that prevent overfishing, while achieving, on a continuing basis, the sustainable harvest from each fishery." Sustainable harvest is defined in the FRA as "the amount of fish that can be taken from a fishery on a continuing basis without reducing the stock biomass of the fishery or causing the fishery to become overfished."

In this assessment, it is proposed that sustainable harvest can be achieved by fishing southern flounder at F_{target} (target mortality rate) and that overfishing will occur above replacement SPR at $F_{threshold}$ (threshold mortality rate). Yield per recruit analysis characterizes the average effects of fishing mortality on a population given our understanding of the species' growth rate and rate of natural mortality. Sustainable harvest and replacement SPR fishing mortality rates were chosen by the PDT through yield-per-recruit analysis. The rates chosen were $F_{20\%SPR}$ as the $F_{threshold}$ and $F_{25\%SPR}$ as the F_{target}.